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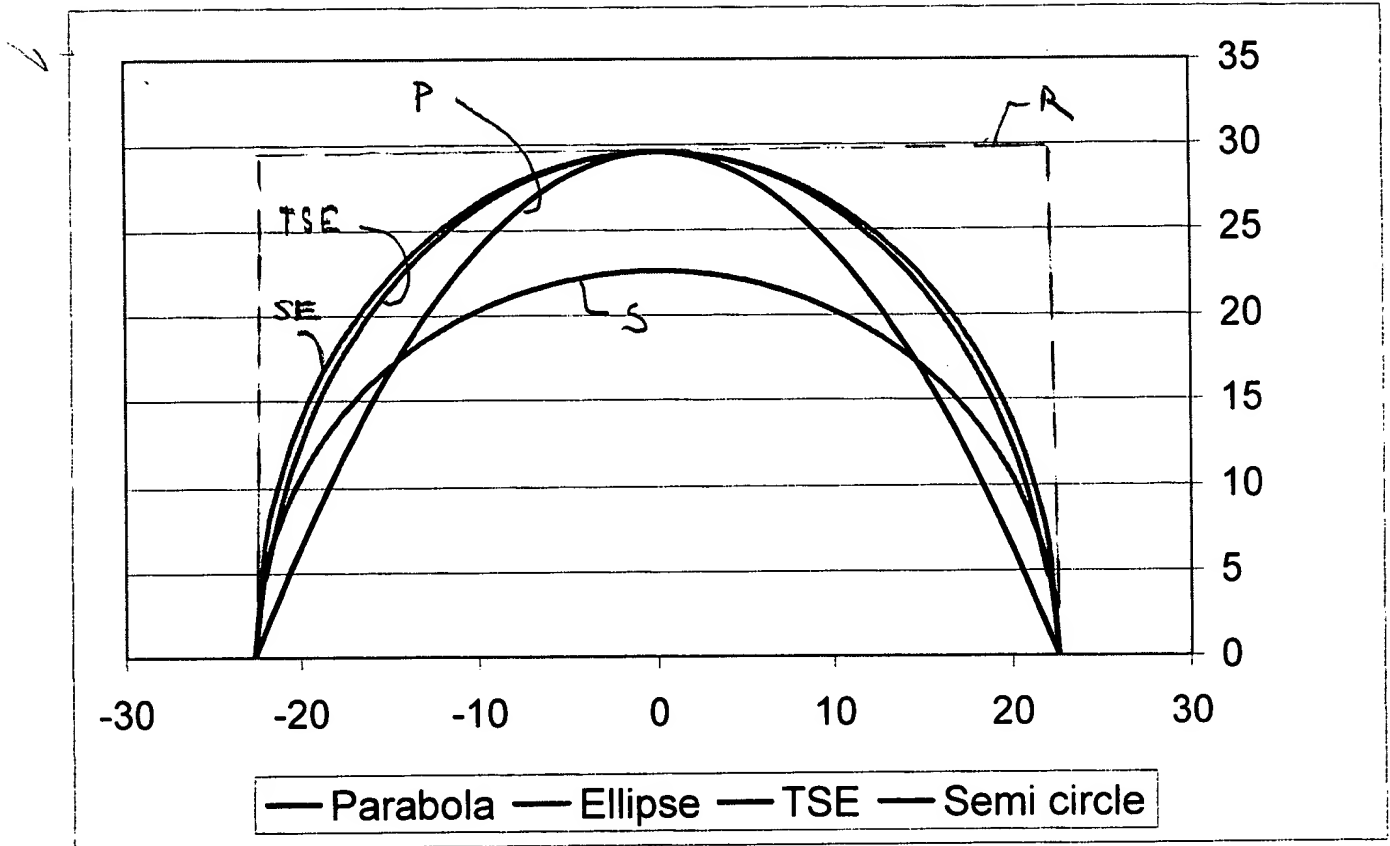


FIG. 1

TABLE 1. COMPARATIVE ARCH SHAPE CURVE PROPERTIES

Arch Curve Shape:	Truncated Semi-Ellipse Note (c)	Semi- Ellipse	Parabola	Semi-Circle	
Lable in Fig. 1	TSE	SE	P	S	
Width at Base - inches	45.2	45.2	45.2	45.2	
Height at Center -inches	29.6	29.6	29.6	22.6	
Volume Parameter	1013	1039	892	802	Note (b)
Relative comparison	26%	30%	11%	0%	
Relative comparison	0%	+3%	-12%	-21%	
Material Parameter	82	82	78	71	Note (a)
Relative comparison	-15%	-15%	-10%	0%	
Relative comparison	0%	0%	+5%	14%	

Notes:

(a) Length of the arc curve from base to base

(b) Area under the arch curve; cross section

(c) Truncation of semi ellipse is 2.7 inches; chamber height is 44-45% of ellipse major axis

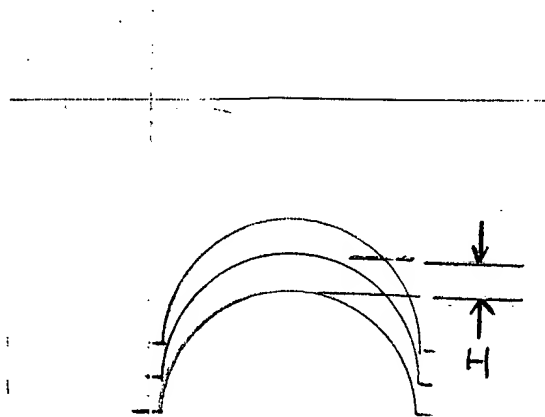


FIG. 2